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Dieter Schwanke, February 1969

Even the Coyote prefers a well trodden path

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The President's Message

Endangered Species

Recently the newspapers carried an item that one of the last orders of the American Secretary of Interior, Walter J. Hickel, was the banning of the import of whale products because whales were on the list of "endangered species". Unfortunately, President Nixon rescinded the order after Mr. Hickel's dismissal.

At the entrance to our Zoo and marked on cages are "vanishing or endangered species" signs. Our Zoo has a relatively high proportion of these species, and our Director, Clive Roots, is making efforts to maintain and to expand the collection of these species in the Zoo.

What are "endangered species"? Technically, they are the species listed in the Red (for danger!) Data Book of the Survival Service Commission published by the International Union for the Conservation of Nature and Natural Resources (I.U.C.N.). This international organization was originally founded in 1934, but received its current name in 1956. The purpose of I.U.C.N. is to perpetuate wild nature and natural resources all over the world. The Union, centred in Morges, Switzerland, has six Commissions: Ecology, Education, Landscape Planning, Legislation, National Parks, and Survival Service. This last commission is charged with the collection of data, the maintenance of lists of all wild animals and plants that may be in danger of extinction, and the initiation of action to prevent extinction. The present list of endangered species includes at least 120 mammals and nearly 187 birds. The number of endangered fishes, amphibians, and reptiles is untabulated as is the number of endangered plants.

Are any species endangered in Manitoba? Many species are in small numbers, but the official list includes the following animals: the Polar Bear, Black Footed Ferret, the Bison, the Barren Ground Grizzly, the Bald Eagle, Osprey, and the Greater Prairie Chicken.

Why should we worry about these endangered species? To most readers the answer is obvious, for they share the belief that human nature needs contact with the natural world of which it is part. Perhaps William Morton Wheeler, a renowned scientist, best expressed it when he wrote of animals, "that apart from the members of our own species, they are our only companions in an infinite and unsympathetic waste of electrons, planets, nebulae, and stars".

**Harold Welch
President**

A Commentary on the Pollution Crusade

by Michael Aleksiuik

Department of Zoology, University of Manitoba.

A great deal of effort has gone into focusing public attention on environmental pollution during the past few years. Most thinking people have been painfully aware of the menace for at least two decades, and the bombardment via the various information media must certainly have reached the unthinking multitudes. The crusaders against pollution have been exceedingly successful in Phase I — pointing out to the masses that industrial activities are rapidly degrading our environments, and, unless something is done soon, the human species will not last another century. Some experts would give us less time, and others more, but all are in agreement regarding our ultimate predicament.

Yet, in spite of this frantic dispersal of factual information to the general public, and in spite of the fact that industrialists are told point-blank they should cool it or "civilization" will topple into one stinking quagmire, there has been no response. There is no evidence of Phase II. No man or corporation has conceded to the pollution crusaders and voluntarily shut down the plant. Some have given up their activities and have become hippies, in most cases precisely because they have not been successful in making a million and thus adding directly to the pollution problem. Most successful industrialists are highly intelligent men. Why have they not responded to the plea?

The crusader sees the unresponsive industrialist as decidedly evil and lays all the blame for our polluted world squarely on his shoulders. The industrialist is called selfish, thoughtless and short-sighted. Indeed, the crusader is often disgustingly self-righteous in his all-too-often shallow appraisal of the causes of pollution. The crusader is usually a professional biologist who prides himself in his understanding of biological function, yet in his attack on the industrialist he has over-looked the relevance of a basic characteristic common to all animals — the innate drive to propagate, exploit and expand. The recent British Empire and Hitler's aborted attempts at expansion are two examples of exaggerated expressions of this characteristic. This attribute of man, compounded by his intelligence and technological achievements, is the ultimate cause of over-exploitation and pollution, but is also the reason for man's tremendous success as a species. Man's drive to exploit his environment is as strong, or stronger, than that in any lower animal. Any person who denies this as true of himself is either dishonest or a type of individual that would be strongly selected against in the remainder of the animal kingdom.

Therefore, in blaming industrial man for exploitation and the resultant pollution problem, the crusader is blaming him for possessing a characteristic that is possessed by **all** other animals, and furthermore, for being what he is even though he did not voluntarily choose to be it. The point immediately comes to mind that the industrialist is not being asked to cut down on production, but rather to take measures against pollution, which we know is physically possible. The industrialists' reluctance to take such measures can also be explained in basic terms. Biological processes appear to aim at efficiency, and putting funds into anti-pollution devices does not make for efficient industrial production. Unless a man is a fisherman (and most aren't), he gives little thought to the fact that he kills significant numbers of fish when he dumps industrial wastes into a stream. This is not because he is thoughtless; it is because he is basically like all other animals. Interspecific altruism does not exist. The crusader argues that in killing fish or any other organism, the industrialist also affects himself or others who may depend directly on that organism for food or other purposes.

We can eliminate the first possibility. Few industrialists live near the sites of their plants, and still fewer depend on local populations of animals for food or any other purpose. As to the second possibility, preservation of self and offspring is the key to natural selection. Intraspecific altruism, too, is rare or non-existent. "But man is a rational being, and surely he realizes pollution will affect the survival of the entire human population, including his own offspring," replies the crusader. Although man happily thinks of himself as rational, he basically is not. Instead, his behaviour and thinking are a result of deterministic processes which affect him during his ontogeny.

Not only is man inherently like all other animals in possessing a basic drive to exploit and expand, but, unlike other animals, he is encouraged to express this potential attribute of his behaviour throughout his life. Early in life, the parents are the major influence, but later, his associates and superiors bring even stronger pressure to bear on him. Enormous financial success is the dream of most men; in our society, one's survival and function depend upon the attainment of at least a portion of that dream. Parents put pressure on their children to be "successful" and to "make something of themselves", and this is almost invariably meant in a financial sense. This obviously encourages industrial activity with the sole goal of financial gain. School textbooks stress and praise industrial achievements of past and present civilizations. The concept of financial aid to "underdeveloped" nations so that they, too, can become "civilized" is widespread. Students come out of high school with the distinct impression that industrial development and financial wealth are and should be the ultimate goals of all nations. In short, education is largely oriented around industry and financial success.

Man, more than any other species, depends upon learning during his development for guidelines to his behaviour during adulthood. Moreover, it is a strong and important characteristic of man that he clings fiercely to his established views. Man is born with a strong desire to exploit his environment, and is pressured to express this desire to be fullest of his abilities. After millions of years of evolution and approximately twenty years of indoctrination, it isn't at all surprising that he does not respond immediately to the warnings of the crusader. Indeed, it would be very surprising if he did respond. The crusader shows extreme biological naivety in thinking that he might. Man's entire biological make-up and his teachings to his young are geared to exploitation. Therefore, it is not difficult to see why the pollution problem exists and worsens as technological development continues.

The point I am attempting to make here is simple: to blame the industrialist for our dire pollution problem is totally unjust, even though it is the industrialists' activities that result in pollution. The fault does not lie with the industrialist; he is only a man doing what he feels is right, which is true of us all. If anywhere, it lies with the direction human society took long ago, for which we can lay no blame. Through our avid utilization of the industrialists' products, we are all intimately involved in the causes of pollution.

What is the answer to our pollution problem? Clearly, it is realistic and important to appreciate that attitudes cannot be changed in the present generation of industrialists. Certainly man's basic drive to exploit cannot be destroyed. However, its expression can be greatly diminished by aiming the pollution crusade at the adolescent group, who will be making the major decisions in society during the next forty years. Stress on industrial development for financial gain should be removed completely from school curricula. The threats of industrial activity to human survival should be stressed instead. Perhaps this could be done by the introduction of "Human Ecology" into the curriculum as a regular course to be taken by all students in all grades. In the meantime, environmental over-exploitation, not man, should be labelled evil and curbed by strong governmental control.

Conservation Ethics

Attitudes of different individuals toward our natural environment and how to preserve it vary greatly. This is also true of differences in aesthetic values and appreciation. As an example there are a few people claiming to be conservationists, yet they oppose applying technological assistance in keeping vanishing wildlife alive. They would rather see deteriorating preserved specimens in museum cases than healthy, happy living representatives in zoological parks or sanctuaries.

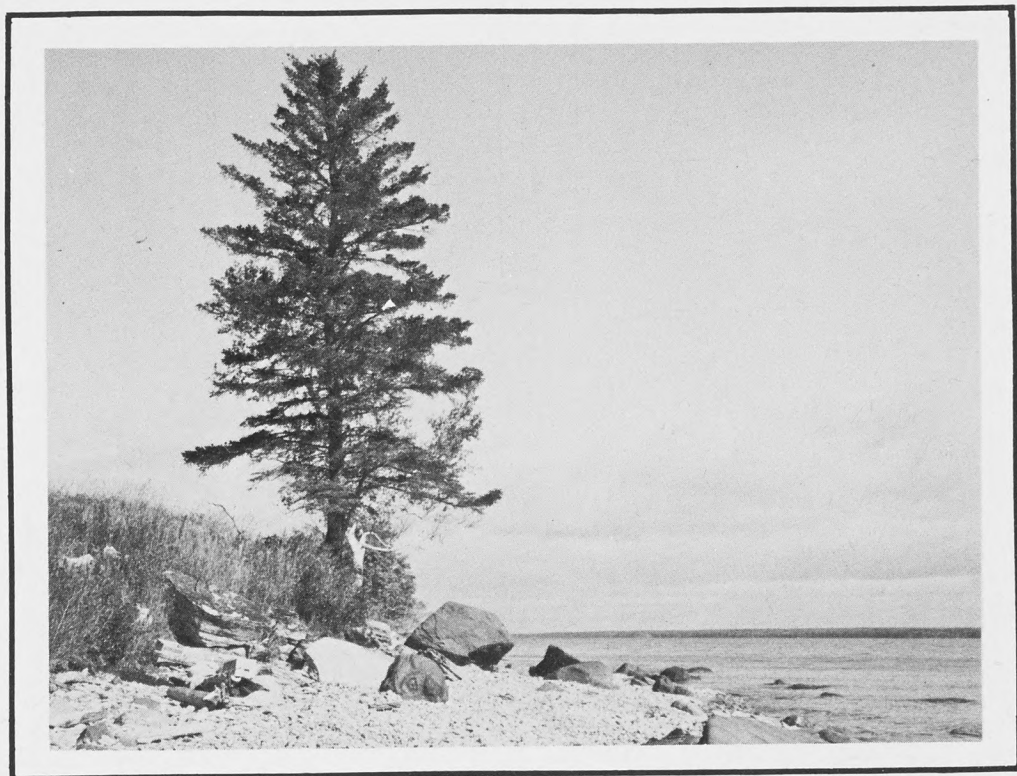
The programs for wild management and artificial supplementation of threatened species is endorsed by the Whooping Crane Conservation Association because such programs can be accomplished without imposing sacrifices on existing wild populations. Therefore, it is the only sensible course of action to follow. One opponent of the captive breeding of whooping cranes has called it a bureaucratic take over, clearly promoted and dominated by avicultural interests. To my knowledge that is the first time anyone has implied that aviculture is not an honorable pursuit.

It was a happy day when the people of Canada and the United States learned the trumpeter swan had been removed from the endangered list; much of the success in that accomplishment can be traced to the advice furnished by aviculturists. Aviculturists also deserve a large portion of credit for saving the Hawaiian goose, Hawaiian duck, and Laysan teal from extinction. Zoological curators are making similar progress with mammals, some of which would have already passed into oblivion without their help. Because a few far-sighted Canadian sportsmen have participated in applying avicultural techniques to stabilize Canada goose production, all north America is benefitting.

The most alarming problem today is we are not preserving wilderness and semi-wilderness areas at a pace rapid enough to insure saving those species of wildlife that need the wild country. The Association's advisory Committee is not abandoning the ecological concepts and conservation ethics, but they do want to keep specimens alive. It is poor judgement to allow creatures of a forest to disappear with their habitat if it can be avoided. As long as a nucleus of breeding stock exists there is hope of returning a species to the wild if its habitat can be rebuilt; or we may be able to help it adapt to another type of habitat through selective breeding.

Saving our land and its resources is a political, rather than a biological problem. Red-tape and greed are slow to overcome, so in the meantime I believe most people feel it is better to relegate an endangered species to an artificial existence than not have it exist at all.

From:
Grus Americana
Quarterly Newsletter
Whooping Crane Conservation Association
Volume 8, Number 1, March, 1969



Black Island in the distance



Hecla Island Development

Work has begun on Hecla Island Provincial Park and the people of Manitoba are watching the proceedings with much interest. There are those who can remember the island as it was in the twenties when the population in the little Icelandic fishing community numbered around five hundred. And there are those who have come to know Hecla only in these more recent years when the special charm of the island's strong natural character has begun to show through the declining community pattern. But even people who have never set foot on the six-car ferry have heard of Hecla and are waiting to see the creation of our 11th Provincial Park.

Hecla Island is shaped a little like a seahorse and together with Grindstone Peninsula, Deer, and Black Islands forms part of a "stepping stone" pattern across Lake Winnipeg. About 20 miles long and averaging four miles wide, Hecla is mostly wetland or marsh — habitat for moose, muskrat and great numbers of waterfowl and other birds. Expanses of black spruce-tamarack bogs on the western side of the island contrast strongly with grassy

pastures on the eastern half where almost all the existing development occurs. Hecla is characterized by highly diverse shorelines, ranging from coarse, cobble beaches to fine sand; stands of mixed timber, including large and picturesque white spruce; excellent protected harbours, such as Gull Harbour at the northeast end of the island; and much scenic beauty, ranging from the blowing marsh grasses to the constantly changing color relationships of the sky and water. In addition to its many natural attributes, the island has a strong historic and cultural interest for it is to these early homesteads that Icelandic immigrants came in the 1870's.

The designation of this Provincial Park is the culmination of approximately five years planning by provincial and federal people. However, the actual concept originated with the islanders themselves, who felt the area had much potential for recreation. Petitions were submitted and the idea found support under the Fund for Rural Economic Development (FRED). Studies were undertaken which predicted a rapidly increasing recreational

demand for day trips, sightseeing, camping and cottage facilities within 100 miles of Winnipeg. As well, a recreation complex could offer opportunities for coordination with other programs such as the manpower training program which is part of a comprehensive plan attempting to "promote economic development, increase income and employment opportunities, and raise the standard of living in the Interlake area."

Specific planning and development for the Hecla Island Complex has been the responsibility of the Parks Branch, Department of Tourism and Recreation, and an initial study prepared by a private consultant has been the basis for the master plan. In accordance with the parks act . . . "the area will be developed with a strong awareness of the implications of the natural site . . ." The plan for Hecla utilizes both the natural and historical features of the area and may be described as a water oriented park with activity occurring at points along a scenic drive. The major centers of activity will each be distinct in character and purpose and will range from almost completely natural areas to highly developed sites providing as broad a range of activities as possible. The adjacent mainland (Grindstone Peninsula) and the other islands in the complex are considered sufficiently large and diverse to make this type of development feasible.

Development of the adjacent islands, Deer, Punk and Black will eventually include such facilities as boat landing areas, hiking trail systems and primitive campgrounds. Negotiations are underway at present to secure parts of Black Island as completely natural areas.

Gull Harbour is to be the most intensively developed of the areas on Hecla. It will include such facilities as a 350 unit campground, a major service center (gas station, general store, laundry, etc.), a park administration office, a major marina with berthing facilities, a boat launch and the possibility of a ferry connection to

Black Island. A day use beach and picnic area will be located on the lagoon at the southern end of the Harbour.

Hecla Village is to be the site of an Historic Village which will attempt to recreate a typical, early Icelandic Settlement. Special emphasis will be given to the way of life in the early communities with restored (or recreated) homes, barns, shops, community buildings and utility buildings housing displays explaining various special procedures and skills that were a part of the old life style. The key to the success of this venture, however, is obtaining a good selection of these old pioneer items from the local people and at present this phase of the project is moving very slowly. It is hoped that by coordinating this program with that of other Icelandic organizations more enthusiastic and positive results will occur.

A third area of development on the island is the old quarry site at the northern end. This site is to be left as much as possible in its primitive condition. Proposed developments include a small harbour, a campground and small service center, a nature center and a starting point for a series of nature and hiking trails. These trails would run along the western edge of the island into an area rich in wildlife, where observation stations could be set up at various points.

Additional day use picnic and beach development as well as some group camp sites are located along a scenic drive on the southeastern shore, but the island is sufficiently large to absorb all planned activity areas and the influx of visitors should not diminish the essential quality of the place. It is hoped the strong natural setting will add a new dimension of enjoyment and appreciation to the recreation experience of the visitor for this water based park will be unique. Rich in both historical and natural features, the area has much to offer the people who are waiting to see Hecla Island Provincial Park.

Phyllis Hilderman



Remains of a steamboat winch



Western Grebes on Hecla Island

Dieter Schwanke, August 1970



Western Grebe, seen from Hecla ferry

Western Grebes are the largest members of the grebe family in Manitoba. They are up to 29 inches in length, have a long, slender neck, and are black with a white breast and white front half of their neck. Their call is a high-pitched "crank", "crank" (always issued in twos), and carries a good distance. The thing, however, that makes Western Grebes so unique is their magnificent courtship display. In this display two birds go through a process of actually holding their bodies vertical and running along the water. They do this usually side by side, and produce a truly spectacular sight.

The Western Grebe is a bird of western North America.

In Canada, it breeds "in south-central and southern interior British Columbia (locally: Williams Lake, Swan Lake and Okanagan Valley, Salmon Arm), north-central and southern Alberta (Peace River district, Christina Lake southward, east to the mountains), central

and southern Saskatchewan (Kazan Lake, Emma Lake southward), and southwestern Manitoba (north probably to northern Lake Winnipegosis, Lake St. Martin, Shoal Lake)".* The author has found this species nesting on Oak Lake, Whitewater Lake (the one near Deloraine), Dog Lake, Lake Dauphin, Lake Manitoba (Delta marshes, and Marshy Point), and Lake Winnipeg (Hecla Island-Grassy Island complex), besides Swan, Rock and Pelican Lakes in the Pembina River system. Western Grebes also nest in the small marshes and larger potholes in the southwest of Manitoba, particularly immediately north of Ninette, around Minnedosa and Glenboro.

Western Grebes build floating nests, completely surrounded by dense vegetation, usually in 2 to 3 feet of water. In Manitoba this vegetation is usually *Phragmites* sp., but to a lesser extent may be *Typha* sp. or *Scirpus* sp. The dense growth affords the nest protection from wave action, and consequently it is not as readily flooded. Western Grebes, like their close relatives, the Eared Grebes, are colonial nesters. The other three species of grebes, Red-necked Grebe, Horned Grebe and Pied-billed Grebe, found in Manitoba, nest solitarily.

Grassy Island; between Hecla Island and the mainland has been for many years one of the major known nesting sites of Western Grebes. On June 18, 1970, 600 nests were counted there. On May 23, 1970, 200 nests were counted on a marsh on Hecla Island at a point immediately south of the ferry landing. Water levels have been extremely high on Lake Winnipeg since 1966, and this, coupled by wind tides on the lake have caused great devastation in these colonies, and they were repeatedly washed out during 1970. By the month.

of July, however, lake levels had receded somewhat and birds nesting in more sheltered areas were successful with a large number of young produced.

Hecla Island, Grassy Island, Deer Island, Punk Island, Black Island and scores of small islands and reefs immediately east of this complex are being incorporated into Hecla Provincial Park.

A causeway is presently being constructed which will connect Hecla Island with the mainland. This causeway is passing directly over Grassy Island, and may well have a devastating effect on the Western Grebe population, in this part of the province. The colony surrounding Grassy Island is now the largest in Manitoba and a road passing through the middle of it will undoubtedly harass the birds. They have already been known to vacate several lakes on the Prairie Provinces, simply because boats with outboard motors have caused too much disturbance around the nesting sites.

The park planners and biologists involved with the project are aware of the situation and are taking steps to alleviate the problem. The colony will be kept under close surveillance in 1971 and 1972. There is a strong probability that the birds will vacate the Grassy Island nesting location, however, it is hoped that if they do, they will move to the marshes on Hecla Island immediately to the south. Discussions are now taking place with respect to dyking the Hecla marshes. If these marshes are dyked, they will be free of wind tide and carp devastation. Water levels could be regulated to some extent and the vegetation would be able to re-establish itself. In this way, the marsh could return to the status it held prior to 1965, and would become important, not only to Western Grebes, but also to other waterbirds as a nesting area.

**David R. M. Hatch,
FRED Waterfowl Biologist**

*Godfrey, W. Earl 1966 *The Birds of Canada* p. 18.

An Island

In days gone by I have often wandered aimlessly along the shores of Hecla Island, talked to a fisherman unloading his catch, listened to the waves crashing on rocky cliffs, felt the spray of Lake Winnipeg. Pursuing a Moose I was myself pursued by an irate cattle beast in one of Hecla Island's pastures. Waiting for the ferry I was dived at by Terns, from the swaying ferry I was fooled by Grebes surfacing from a dive where I least expected them.

An increased economy will bring us better recreation facilities, campgrounds, fast and easy access to Hecla via causeway, a one stop service centre at Gull Harbor. The influx of people will mean more management of natural resources.

I have enjoyed lazy days gazing over the waters rushing at the rocks, watched the flies follow the cows over the pastures, slapped mosquitoes in Hecla's dark spruce bogs. I watched three Loons riding the waves a stone's throw from the beaches

and I am glad.
D.H.S.

Insects

Versus

the Chills of Winter

**The North wind doth blow
And we shall have snow
And what will poor Robin do then
Poor thing?**

No doubt you all know the rest of the rhyme as well as the true answer as to what "Poor Robin" does in winter. But if I substituted "insects" instead of "Robin," would you still know the answer? How do tiny insects survive when the frosty fingers of winter grip the blanket of ice and snow pulled over field and forest?

This question has intrigued Man since he began to ask questions. There have been some very fascinating answers given by the insects that have been studied. I will not attempt to describe the method each species has evolved as there are as many methods as there are insect species. Instead, I will describe four methods of surviving winter and illustrate them with examples of species that occur in Manitoba.

The first method is the simplest — escape. Insects using this method simply migrate to a warmer climate just as many birds do. Naturally, insects that migrate must be equipped for rapid travel, they must be strong fliers, since it is a long way to walk. Some

insects that migrate regularly are Monarch Butterflies, Cabbage White Butterflies, Painted Lady Butterflies and Dragonflies. The beautiful orange and black Monarch Butterfly is the best known of this group. It arrives in Manitoba in late May and early June and leaves in July, August and September for the south. The winter is spent in the southern United States from Florida to California and Mexico. The amazing part of this story is that most of the butterflies that leave in autumn do not return in the spring. The butterflies raise one or two generations in their winter territory and most of the butterflies that return in the spring are children or grandchildren of the ones that left in the previous autumn. How do these butterflies learn to migrate north in spring and south in autumn? Nobody knows.

The second method of surviving the winter is to enter a resting stage in which life processes are maintained at a very low rate. This stage is known as diapause and may occur in any stage, depending on the insect species. Some

enter diapause in the egg stage, some in the larval stage, some in the pupal stage and some even in the adult stage. In diapause the insects require very little energy to sustain life and therefore do not need to feed. Grasshoppers illustrate various kinds of diapause. The Two-striped Grasshopper, Clear-winged Grasshopper and Lesser Migratory Grasshopper have a diapause in the egg stage; the Green-faced Grasshopper in the nymphal or larval stage; and a few species have diapause in the adult stage. The eggs in diapause will not resume normal development until a certain period of time has been spent near or below freezing temperatures. The diapause prevents the eggs from hatching in the autumn when the nymphs would certainly be killed by cold weather before they became mature enough to lay more eggs.

The third method is to seek a sheltered spot in which the daily fluctuations of temperature would not be experienced. The spot chosen usually has some sort of insulating property that prevents rapid heat loss from the insect. Most of you will be familiar with the presence of Houseflies, Blue Bottle Flies and Mosquitoes in your houses or around your windows in the fall. They may sometimes be induced to become active on mild days in the winter but if they leave their hiding place they are usually killed in the next cold spell. Similarly Ladybird Beetles search for crevices on houses or fences for shelter. Of course we must not forget the moths and butterflies that spin cocoons in which to spend the winter. Soil insects such as Wireworms and June Beetle larvae burrow deeper in the soil in autumn where temperatures are much warmer than in air. Still others hide in dead leaves or grass, or hollow trees throughout the winter. A few insects survive in piles of grain, a man-made habitat. One of these is the Rusty Grain Beetle that has received much attention by farmers this autumn.

At this point it should be made clear that the survival of insects at low temperatures depends on two factors (1) the temperature to which they are exposed and (2) the length of time they

are exposed to that temperature. Furthermore, insects do not freeze as soon as the temperature falls below 32° Fahrenheit. Most insects will not freeze instantly unless they are exposed to a temperature of 10° F or lower. The higher the temperature, the longer the insect can escape being frozen. Several materials can provide insulation from the extremes of air temperature, snow, leaves, grass, wood and soil. Therefore, more insects will survive when snow cover is deep than when it is thin. In addition, not all individual insects will survive the winter but a greater proportion will survive a mild winter than will survive a severe winter.

As an example of the effect of temperature and time of exposure on insect survival, let me describe some experiments done with Rusty Grain Beetles. When adults were conditioned to low temperatures and exposed to 20° F for 4 weeks, 95 percent of them survived, whereas when they were exposed to 10° F, only 50 percent survived.

The fourth method of surviving the winter is to be able to withstand freezing. An example of this is the European Corn Borer larva which can be frozen solid but when it is thawed again it resumes its normal activities with no sign of damage. The larvae feed inside cornstalks during the summer. In autumn they chew to the base of the stalk and spend the winter at ground level inside the stalk in a loose silken case. Snow cover would aid their survival but since they can withstand being frozen, it is not essential.

These are a few examples of methods the insects use to escape the rigors of winter. It is not surprising that many different methods have been developed by insects. They would not be so abundant if they had not evolved many different methods of surviving unfavourable weather. Therefore, when you travel around the country on your winter outings, remember that although the landscape seems still and lifeless, there are millions of tiny insects patiently resting until they are awakened by the warm days of spring.

L. B. Smith

Shrike Behaviour

Mention carnivorous birds to almost anybody, and you are sure to conjure up visions of mighty eagles, streamlined falcons, soaring hawks, or "wise old" owls. But there is another, much smaller, group of avian predators — the shrikes or "butcher birds." Of the 70 or so species of these fascinating songbirds, only two occur in North America, and both of them are found in Manitoba at some time in the year.

Shrikes look generally like most other songbirds, but their heavily hooked beaks, black facial masks and white wing-flashes easily set them apart from any other Manitoba bird. Deciding which of the two species you are watching is a little more difficult, however. The Loggerhead (also known as the Migrant or White-rumped) Shrike nests in southern Manitoba and is not found here in the winter. The Northern Shrike winters here, and does not appear in the summer. However, as their migratory periods overlap (I have seen both within a few yards on the same day), and as accidents and other factors frequently keep birds here at the "wrong" season, the time of year is not a reliable characteristic, only a clue. There are three features which, if observed carefully, will tell you which shrike you are observing. There are i) the black mask, ii) the bill, and iii) the breast feathers.

As pointed out in figure 1, the black mask of the Loggerhead extends to meet over the bill, while that of the Northern Shrike does not. This is apparently a very reliable feature, but I have found it difficult to use except at very close range, because it can be hard to separate the black of the bill from that of the feathers above. A close inspection of the lower mandible of the hooked bill will reveal an all-dark bill in the Loggerhead, but a dark upper and light lower bill in the Northern. This takes close inspection, but once seen is very certain. The breast feathers of the Northern show a faint barring, not found in the Loggerhead, another feature which needs a good, careful look. These three characters all help distinguish adults, which are a beautiful soft grey in both species. The immature birds are a little easier, as the barring of the young Northern stands out very well, and the plumage is brown, in contrast to the grey of the Loggerhead.

The lucky observer may be able to follow the nesting habits of the Loggerhead Shrike in the summer, but as we are just about to enter winter's icy grip, let us take a brief look at the hunting habits of the winged warrior from the North.

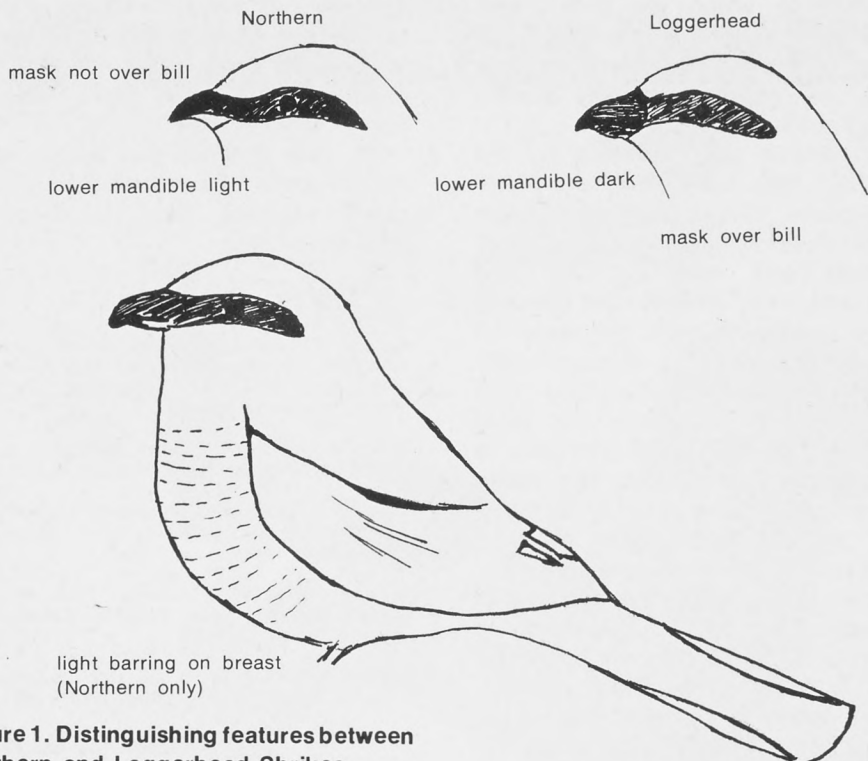


Figure 1. Distinguishing features between Northern and Loggerhead Shrikes.

The over-all diet of the Northern Shrike consists of insects, lizards, frogs, small mammals, and small birds, but only the latter two items are available for him to catch in southern Manitoba at this time of year.

Studies of the Northern Shrike on his Alaskan nesting grounds and New York wintering grounds, and of the Great Grey Shrike (the European race) in his African wintering grounds have indicated two principal methods of capturing prey. The first, and most common, is that of "watchful waiting" in which the shrike perches on the high branch of a tree, a wire or some other lofty vantage point, and waits for a vole or mouse to appear. The shrike then swoops down on the little rodent, relying on surprise to overcome his prey. This behaviour is frequently seen along Manitoba's roadsides, and the lofty perch makes the shrike easy to spot from a distance.

The second hunting method consists of flying actively about the ground or through brushy areas, and attempting to flush out the prey so that it can

be pursued. Apparently this method is less often successful, and used less frequently.

On the prairies, a third method is sometimes used: This consists of hovering above the ground, watching for prey to emerge. As much of the prairie land consists of vast treeless tracts, with fallen grain or grass, excellent cover for small voles and mice, the shrike would be missing out on a vast food source, if he did not use this method.

Is the shrike always successful in capturing his prey? Certainly not — most birds, if pursued manage to reach cover before the shrike can catch them. Rodents also quickly take cover, or if approached too closely may rear up and strike at the shrike, threatening to bite the bird with its chisel-like teeth. Peter Press, Lorne Wallace, and John Wright once observed a vole-sized mammal successfully ward off a shrike in this manner as the shrike swooped repeatedly at the mammal. But, alas, close to cover, the mammal made one last dash,

neglecting to watch the shrike, and once again contributing to the belief that in predator-prey interactions, it is the old, young, sick, and unwary who do not survive.

The shrike's prey is killed by the beak, but may be carried off either in its claws or in its beak. Its feet are too weak to hold large prey, such as birds and mammals, but like hawks and owls, it must hold the prey still in order to rip off the meat for consumption. Surely a bird so well-adapted for catching his food isn't unfit to eat it! Of course not. What the shrike lacks in body structure is made up for in behaviour. The shrike uses a tool, in the form of a sharp spike, barbed wire, garden fork, or tree crotch to hold his prey for him. European researchers have shown that to impale its prey the shrike carries it to a perch, seizes it by the head, and drives it down on the thorn or other suitable spike. In this way, insects are speared through the thorax, and small birds and mammals through the throat. This also allows the shrike

to store food caught in times of plenty for times of poor hunting. The resulting larders of dead prey hanging from various spikes have given them the name "butcher bird."

On **your** rambles this winter, watch for Northern Shrikes. A few minutes spent watching their behaviour are well worthwhile.

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The Snowy Owl with ookpital cowl
flaps southly every season.

The question I learn,
is of concern
to those who'd establish a reason.

I've heard pundits state
in attempts to relate,
the predator/prey correlation:
from this I deduce
that if lemmings produce,
then the owls will increase population.

Now why is he here?
For this is not clear,
some tentatively suggest a migration.
Others I know say this is not so
it's merely a food motivation.

The question this poses —
is it *Nyctea's* neuroses
that brings him so far every year?
But it's simpler than this,
as he would insist —
"It's very much warmer down here."

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